

Appendix B

Construction Specifications

A-E Construction Specification

SUBCONTRACT NO. TBD
PROJECT FILE NO. 021048

CFA-08 STP DRAINFIELD COVER

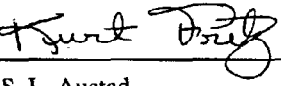
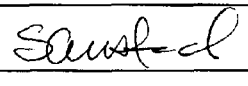
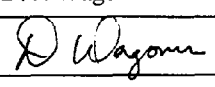
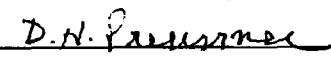
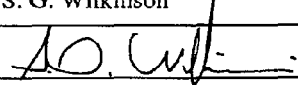

APPROVED FOR CONSTRUCTION

Prepared for:
U.S. Department of Energy
Idaho Operations Office
Idaho Falls, Idaho



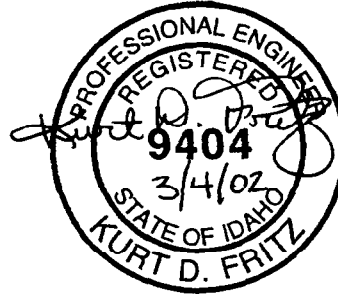
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CFA-08 STP DRAINFIELD COVER

The following sections of this specification were prepared under the direction of the Professional Engineer as indicated by the seal and signature provided on this page. The Professional Engineer is registered in the State of Idaho to practice Civil Engineering.



Division 1 – General Requirements

01005 Summary of Work
01051 Construction Surveying And Staking
01300 Submittals

Division 2 – Site Work

02200 Earthwork
02444 Chain Link Fence
02486 Revegetation

**SPECIFICATIONS
FOR
CFA-08 STP DRAINFIELD COVER**

Prepared for:

**U.S. DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE**

Idaho Falls, Idaho

Project File No. 021048

March 2002

**BBWI
Idaho Falls, Idaho 83415**

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ATTACHMENTS:

VENDOR DATA SCHEDULE
SCHEDULE X

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SECTION 01005--SUMMARY OF WORK

PART 1--GENERAL

SUMMARY:

The Subcontractor shall furnish plant, labor, material, and equipment and perform work and operations necessary to construct the Central Facilities Area (CFA)-08 Drainfield Cover complete, in accordance with the subcontract drawings and these specifications.

Section includes, but is not limited to:

- Mowing existing vegetation
- Demolishing of above ground portions of distribution boxes
- Excavating, hauling, and placing earthen materials
- Grading, leveling, and other earthwork
- Revegetating
- Fencing

REFERENCES:

The following documents, including others referenced therein, form part of this section to the extent designated herein.

CODE OF FEDERAL REGULATIONS (CFR)

- 29 CFR 1910 "OSHA Occupational Safety and Health Standards"
- 29 CFR 1926 "OSHA Health and Safety Standards for Construction"

BECHTEL BWXT, IDAHO (BBWI)

Subcontractor Requirements Manual

Unless otherwise specified, references in these specifications or on the subcontract drawings to other specifications, codes, standards or manuals that are part of these specifications, but not included herein, shall be the latest edition, including any amendments and revisions, in effect as of the date of this specification.

SUBMITTALS:

See Section 01300, Submittals, and the Vendor Data Schedule for submittal requirements.

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QUALITY ASSURANCE:

Quality Assurance Program requirements exist to ensure that work performed is in conformance with the requirements established by the drawings and this specification. Quality Assurance Program criteria applicable to this scope of work are addressed in SC-5 of the Special Conditions and these specifications and BBWI Subcontractor's Requirements Manual.

Standard Products: The materials and equipment furnished by the Subcontractor shall be standard products of manufacturers regularly engaged in the production of the type of materials and equipment required and shall be of the manufacturer's latest standard designs.

SAFETY, HEALTH, AND ENVIRONMENT:

Work shall be in compliance with the applicable sections of 29 CFR 1910, 29 CFR 1926, the Health and Safety Plan (HASP) for Waste Area Group 4 Remedial Design/Remedial Action, and the BBWI *Subcontractor Requirements Manual*.

DELIVERY, STORAGE, AND HANDLING:

All packaged materials shall be delivered to the site in the original, unopened packages with labels intact. Upon arrival, the Subcontractor shall inspect the materials or equipment for damage.

PART 2--PRODUCTS

MATERIALS:

New Materials: Materials received by the Subcontractor in a damaged condition shall be repaired or replaced by the Subcontractor as directed by the Contractor. Materials damaged by the Subcontractor shall be repaired or replaced by the Subcontractor.

Government Furnished Materials (GFE): Items shown on the subcontract documents as (GFE) are materials and/or equipment that is furnished by the Government to be installed by the Subcontractor. A complete and composite list of such material is attached to the Subcontract Specifications and is referred to as the Schedule "X" list.

PART 3--EXECUTION

CONSTRUCTION AND INSTALLATION:

General: Materials shall be erected or installed only by qualified personnel who are regularly engaged in the trades required to complete the work. The subcontract drawings show the general arrangement of the earthen cover. It shall be the Subcontractor's responsibility to

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1 verify changes in conditions or rearrangements necessary because of differing site
2 conditions. Where rearrangements are necessary, the Subcontractor shall, before construction
3 or installation, prepare and submit drawings of the proposed rearrangement for approval.
4

5 Coordination of Work: Where new work and existing facilities are shown on the drawings,
6 but are not located precisely by dimensions, the Subcontractor shall be responsible for proper
7 location and clearances and for correcting discrepancies and interferences in the work, which
8 are a result of Subcontractor operations. Work done by one trade that must be integrated
9 with work of other trades shall be laid out with due regard to the work done, or to be done,
10 by other trades; particularly if the work done by one trade depends upon completion or
11 proper installation of work done by other trades. The Subcontractor shall cooperate in
12 coordinating his work with work being done by others if their work must be integrated with
13 the Subcontractor's work. The Subcontractor shall notify the Contractor at least one week
14 prior to starting of the date in which the Subcontractor proposes to proceed with the work.
15

16 Workmanship: Work shall be done in a skillful and workmanlike manner.
17

18 END OF SECTION 01005

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SECTION 01051--CONSTRUCTION SURVEYING AND STAKING

PART 1--GENERAL

SUMMARY:

Section Includes: Work includes, but is not limited to:

Establish vertical control, set slope stakes, and set grade-finishing stakes. The Subcontractor shall perform surveying to ensure that the proper grades, lines, and levels are established as set forth in these specifications and as shown on the design drawings. Surveying may be completed by the Subcontractor, or an independent survey firm, provided the work is performed under the supervision of a Registered Land Surveyor in the State of Idaho.

SUBMITTALS:

Submittals include, but are not limited to, the following:

Certification: Submit certification that the land surveyor is a registered Professional Land Surveyor licensed in the State of Idaho.

Logbook: Copies of logbook entries shall be submitted upon completion.

Topographical Surveys: Electronic data shall be reduced and plotted by the Subcontractor in standard ASCII and Autocad 14 format. Electronic data shall be submitted on electronic media such as CD or Zip Disk. Legible notes, drawings, and electronic data files (including point number, northing, easting, elevation, and point description) shall be submitted to the Contractor for approval. All surveys shall be conducted using the established project datum. Required surveys shall consist of:

- 1.) Topographical survey of the existing borrow sources prior to borrow removal. Upon completion of the earthen cover construction, another survey of each borrow source shall be performed and submitted along with volume calculations utilizing the average end area method (or similar approved method) showing the total borrow volume.
- 2.) Topographical survey of the final surface of the engineered cover and a topographical map of the area with a contour interval of 1 foot.
- 3.) Topographical survey of the final surface for the following layers: pit run gravel, cobble, and pea gravel. The topographical survey, to the neat lines of the finished surface, for the cobble and pea gravel layers shall be the method of measurement for the cobble and pea gravel layers. Surveys shall be submitted with volume calculations utilizing the average end area method (or similar approved method) showing the total volume placed.

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See Section 01300 - Submittals, Section 02200 - Earthwork and Vendor Data Schedule, for additional requirements.

QUALITY CONTROL:

Qualifications: Construction surveying and staking shall be accomplished under the direction of a registered Professional Land Surveyor.

PART 2--PRODUCTS

Stakes: Identification stakes and hubs shall be of sufficient length, width and depth to provide a solid set in the ground and to provide space for marking above ground when applicable. The top 2-in. of all slope, guard, reference, clearing, and structure stakes shall be painted or marked with plastic flagging.

PART 3--EXECUTION

SURVEY REQUIREMENTS:

General: The Subcontractor shall verify that as-built thickness' and elevations match those shown on the design drawings, and prepare as-built drawings.

The Subcontractor is responsible for controlling lift thickness' to ensure the engineered cover conforms to the specified dimensions.

Accuracy: Optical survey, tape measurement, and electronic measurements shall have a minimum accuracy of ± 0.1 feet in horizontal locations and ± 0.05 feet in elevations.

Project Datum: Existing control monuments are shown on the drawings. Horizontal coordinates are based on NAD27 Idaho East Zone State Plane. Vertical datum is NGVD29. All surveying for the project construction shall be based on this datum. Prior to commencement of construction work, the Subcontractor shall verify and establish survey control inside the work area.

Survey control points shall be established so that any point within the job site can be accurately re-established and elevations obtained any time during the course of the construction.

Slope Stakes, Clearing Limits, and Reference Stakes: Slope catch-points, clearing limits, and slope reference stakes shall be established. The position of these stakes shall be determined by methods that will produce on the ground the accuracy shown above.

Clearing limits shall be located on the ground and marked with lath, flagging, or other methods approved by the Contractor's Representative.

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The elevation of slope reference stakes shall be verified for accuracy by a differential level run over the reference stakes between benchmarks.

Monuments of Property Boundaries or Surveys of Other Agencies: If property boundary or survey monuments, or survey markers of other agencies, are found within or adjacent to the construction limits, the Subcontractor shall immediately notify the Contractor's Representative.

Grade Finishing Stakes: Finishing stakes are required on the pit run gravel layer and the finished grade. Stakes shall be set on a 50-ft minimum grid and at the shoulders. Pit run finishing stakes shall be red tops and final grade course finishing stakes shall be blue tops.

Finishing stakes shall be set when the pit run gravel is within 0.2 ft and finish course is within 0.1 ft of the final grade. The stakes shall be set to the nearest 0.05 ft of the measured grade line.

METHOD OF MEASUREMENT:

Surveying: Surveying will not be measured.

BASIS OF PAYMENT:

Surveying: Payment for surveying shall be included in the Lump Sum bid item—Balance of Work.

FIELD QUALITY CONTROL:

Surveillance will be performed by the Contractor's Representative to verify compliance of the work to the drawings and specifications.

END OF SECTION 01051

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SECTION 01300--SUBMITTALS

PART 1--GENERAL

SUMMARY:

This section specifies the administrative, technical and quality requirements for Vendor Data submittals. Vendor Data requirements are specified in individual specification sections and tabulated on the Vendor Data Schedule. In the event of conflicting requirements, the submittal requirements prescribed in the individual specification section shall prevail.

The Subcontractor shall submit data, drawings, and other submittals specified. If the Contractor determines the Subcontractor's submittal to be incomplete or unacceptable, the Subcontractor shall make a complete and acceptable submittal to the Contractor by the second submission of a submittal item.

The Subcontractor shall be responsible for advising the Contractor of any submittal that may be delayed and that might, if further delayed, extend completion of the project.

Section Includes, but is not limited to: the preparation, transmittal, and delivery of documents by the Subcontractor to the Contractor as required in the "Submittals" subdivision of the specification section and as provided on the Vendor Data Schedule.

Related Sections: General Provisions, Special Conditions, Drawings, Vendor Data Schedule, and other sections of these specifications apply to this section.

REFERENCES:

The following documents, including others referenced therein, form part of this section to the extent designated herein.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Y14.1 Drawing Sheet Size and Format

SUBMITTALS:

General Procedures: Vendor data, whether prepared by the Subcontractor or Subcontractor's subcontractor or supplier, shall be submitted as instruments of the Subcontractor. Therefore, prior to submittal, the Subcontractor shall ascertain that material and equipment covered by the submittal and the contents of the submittal itself meet all the requirements of the subcontract specifications, drawings, or other contract documents.

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- 1
2 Each submittal shall contain identification for each separable and separate piece of material
3 or equipment and literature with respect to the information provided in the specification and
4 on the Vendor Data Schedule. Submittals shall be numbered consecutively for each different
5 submittal.
6
7 Vendor Data Schedule: Vendor Data, required by the specification sections to support
8 design, construction, and operation of the project, are identified on a Vendor Data Schedule.
9 The Vendor Data schedule is an attachment to the specification. The Vendor Data Schedule
10 provides a tabular listing by item number, drawing or specification reference, and
11 description of the item or service. The type of submittal is identified by a vendor data code,
12 which is preceded by the number of copies to be included with the submittal. Routine
13 submittals will require 6 copies for Mandatory Approval and 4 copies for Information Only.
14 The time required to submit the item is identified by a "When to Submit" code. An
15 "Approval" code specifies whether the submittal is for Mandatory Approval or for
16 Information Only. A column is included to indicate if receiving inspection is required.
17
18 Construction Vendor Data Transmittal and Disposition Form: All vendor data shall be
19 submitted to the Contractor using the Construction Vendor Data Transmittal and Disposition
20 Form. The form provides the Subcontractor a convenient method to submit vendor data and
21 provides the Contractor a means of dispositioning the submittal. The Subcontractor shall list
22 the Vendor Data Schedule item number, drawing or specification number, submittal status
23 (e.g., Information Only, Re-submittal, or Or-equal submittal by placing the quantity enclosed
24 in the space), and the item description
25
26 Disposition by the Contractor: The Contractor's comments and required action by the
27 Subcontractor will be indicated by a disposition code on the submittal. The disposition codes
28 will be classed as follows:
29
(A) "Work May Proceed." Submittals so noted will generally be classed as data that appear to be
30 satisfactory without corrections.
31
32
33 "Subject to Incorporation of Comments." This category will cover data that, with the correction
34 of comments noted or marked on the submittal, appear to be satisfactory and
35 require no further review by the Contractor prior to construction. Revised
36 drawings shall be provided upon request.
37
(C) "Work May NOT Proceed. Revise and Resubmit." Submittals so dispositioned will require a
38 corrected resubmittal for one of the following reasons.
39
40
41 1) Submittal requires corrections, per comments, prior to final review.
42 2) Submittal data are incomplete and require more detailed information prior
43 to final review.

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3) Submitted data do not meet specification requirements.

(D) "Received for Information Only." Submittals so dispositioned will generally be classified as Information Only for as-specified material and equipment.

Mandatory Approval code vendor data will be reviewed by the Contractor and receive an A, B, or C disposition. Information Only submittals will receive a D disposition. A, B, and C-coded dispositioned submittals will be returned to the Subcontractor. D dispositioned submittals will not be returned to the Subcontractor. The Contractor may provide internal review of Information Only submittals. In the event that comments are generated on an Information Only submittal, the submittal may be re-dispositioned B or C code and returned to the Subcontractor for appropriate action. Acknowledgment of receipt of dispositioned vendor data by the subcontractor will not be required.

The Contractor will return dispositioned submittals with reasonable promptness. The Subcontractor shall note that a prompt review is dependent on timely and complete submittals in strict accordance with these instructions.

PART 2--PRODUCTS (SUBMITTAL REQUIREMENTS)

DRAWINGS:

The following additional submittals shall be required as indicated on the Vendor Data Schedule:

"Redline" Drawings: Copies of the construction drawings shall be updated to include all changes or modifications made during construction and to reflect the actual conditions of construction. Each drawing shall be marked "As-Built" and be signed by the Subcontractor representative and shall be suitable for XEROX copying or microfilming.

PART 3--EXECUTION (NOT APPLICABLE)

END OF SECTION

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SECTION 02200--EARTHWORK

PART 1--GENERAL

SUMMARY:

Section Includes: Work includes, but is not limited to:

- Controlling dust
- Demolition of Distribution Boxes
- Mowing vegetation as required
- Excavating, stockpiling, hauling, placing, and compacting all earthen cover materials as specified herein
- Recontouring, finish grading, and grading for surface drainage

REFERENCES:

The following documents, including others referenced therein, form part of this section to the extent designated herein.

AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
(AASHTO)

- | | |
|-------------|---|
| AASHTO | Standard Specifications for Transportation Materials and Methods of Sampling and Testing |
| AASHTO M145 | Recommended Practice for the Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes |
| AASHTO T11 | Standard Method of Test for Materials Finer Than 75 Micrometer (No. 200) Sieve in Mineral Aggregates by Washing |
| AASHTO T27 | Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates |
| AASHTO T99 | Standard Method of Test for the Moisture-Density Relations of Soils Using a 5.5 lb (2.6 kg) Rammer and a 12 in. (305 mm) Drop |
| AASHTO T238 | Standard Method of Test for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth) |

CODE OF FEDERAL REGULATIONS

- | | |
|-------------|--|
| 29 CFR 1926 | "OSHA Health and Safety Standards for Construction," Subpart P |
|-------------|--|

IDAHO TRANSPORTATION DEPARTMENT (ITD)

- | | |
|------|---|
| SSHC | Standard Specification for Highway Construction |
|------|---|

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1 SUBMITTALS:

2
3 Submittals include, but are not limited to, the following:

4
5 Construction Work Plan: The Subcontractor shall submit for Contractor approval a work
6 plan detailing the methods and equipment for clearing vegetation, distribution box
7 demolition, dust control, and constructing the earthen cover. The construction work plan
8 shall specifically address methods for controlling mixing of layer materials and placement of
9 the two loam soils.

10
11 Sieve Test Reports: Submit sieve test report for the pea gravel and cobble for approval.

12
13 See Section 01300, Submittals, and the Vendor Data Schedule for additional submittal
14 requirements.

15
16 PART 2--PRODUCTS

17
18 General: "Satisfactory" earthen materials shall be free of debris, waste, frozen materials,
19 rock or gravel larger than 3 in. in any dimension (with the exception of the cobble),
20 vegetation, and other deleterious matter. Prior to the commencement of actual borrow
21 activity, top soil and/or overburden (minimum of 12 inches) material will be stripped and
22 stockpiled along the perimeter of the disturbed area for use at the time of reclamation, or
23 immediately placed in another area ready for reclamation.

24
25 BORROW:

26
27 Pit Run Gravel: Select pit run gravel is available at the CFA gravel pit. Gravel pit material
28 and use of the gravel pits shall be at no cost to the Subcontractor. Upon completion of
29 operations involving fill material removal, the Subcontractor shall grade and reshape the
30 disturbed areas of the gravel pit. Sloped surfaces of the borrow source shall be graded to a
31 minimum of 4H:1V and a maximum of 3H:1V sideslopes.

32
33 Native Loam Soil: Native loam material shall be from the Lincoln Boulevard pit and
34 Spreading Area A. This material and use of the pits shall be at no cost to the Subcontractor.
35 Upon completion of operations involving fill material removal, the Subcontractor shall grade
36 and reshape all disturbed areas as specified in Part 3 of this specification. The subcontractor
37 shall also revegetate the disturbed areas in accordance with Section 02486 of this
38 specification. Sloped surfaces of the borrow sources shall be graded to a minimum of 4H:1V
39 and a maximum of 3H:1V sideslopes.

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GRANULAR BORROW:

Pea Gravel: Pea gravel shall be obtained from an offsite location(s) and consist of naturally or artificially graded mixture of washed, well-rounded gravel meeting the following requirements for gradation as specified below and determined in accordance with AASHTO T27. Pea gravel shall be prepared and furnished by the Subcontractor.

<u>Sieve Size</u>	<u>Percent Passing</u>
1 in.	100
¾ in.	90–100
1/2 in.	--
3/8 in.	20–55
No. 4	0–10
No. 8	0–5

Cobble: Cobble shall be obtained from an offsite location(s) and consist of naturally or artificially graded mixture of washed, well-rounded gravel meeting the following requirements for gradation as specified below and determined in accordance with AASHTO T27. Cobble shall be prepared and furnished by the Subcontractor.

<u>Sieve Size</u>	<u>Percent Passing</u>
6 in.	100
2 in.	<10

PART 3--EXECUTION

BORROW:

Prior to the commencement of the actual borrow activity, topsoil and/or overburden material (minimum of 12 inches) will be stripped and stockpiled along the perimeter of the disturbed area, or immediately placed in another area ready for reclamation.

To reduce mortality of soil microorganisms and the invasion of weedy plant species, topsoil will only be temporarily stockpiled. In most cases, this should not exceed one year. Overburden and topsoil stockpiles exceeding one year duration will be seeded with a vegetation mix compatible with re-vegetation objectives.

Once a section of the borrow soil pit is ready for reclamation, the stockpiled overburden and topsoil shall be applied such that there is sufficient depth and quality of material to support the re-vegetation species.

Excavated material containing deleterious material shall be disposed of in manner which precludes entry into surface water.

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Petroleum products, hazardous, toxic and/or deleterious materials shall not be stored, disposed or accumulated adjacent to or in the immediate vicinity of state waters unless adequate measure and controls are provided to ensure those materials will not enter state waters as the result of high water, precipitation runoff, wind, storage facility failure, accidents in operation, or unauthorized third party activities.

Waste, resulting from the project execution, such as petroleum products, hazardous, toxic and/or deleterious materials shall not be stored, disposed of or accumulated adjacent to state water unless adequate control measures are provided which precludes the entry of these materials into state waters.

When re-contouring slopes for reclamation, final slopes will reflect natural contours for the area and blend with the natural landscape. Areas to be re-seeded shall have a minimum of 4H:1V and a maximum of 3H:1V sideslopes from the native ground elevation to the toe of the pit.

DUST CONTROL:

The Subcontractor shall minimize the creation and emission of dust per Idaho Administrative Procedures Act (IDAPA) Standards 58.01.01.650 and 58.01.01.651 during all work activities performed under this contract. This requires that all reasonable precautions be taken to prevent the generation of fugitive dust. This shall be accomplished by the use of water trucks, visual observation, or covering of trucks. Water-based dust control additives may be used with the approval of the Contractor. The Subcontractor shall control the amount of water used so as not to create flowing water or overly moist loam fill material. Source of water for dust suppression will be specified in the Special Conditions.

MOWING SURFACE VEGETATION:

This work shall consist of mowing or brush-hogging (or similar approved methods) of all weeds, grass, brush, and shrubs from within the boundaries of the full-depth soil cover as shown on the drawings and in accordance with these specifications. Mowing shall remove vegetation to as close to the ground surface as practicable and reduce the size of the vegetation to particles as small as practicable. Mowed vegetation shall be evenly distributed across the boundaries of the cover materials. Care shall be taken inside the boundary of the drainfield to keep the mowed vegetation particles inside the area of the drain tiles.

DISTRIBUTION BOX DEMOLITION

The five distribution boxes shall be demolished and backfilled prior to construction of the cover. The aboveground concrete structures shall be collapsed into each distribution box, and the balance filled with pit run gravel and compacted to the extent possible.

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SOIL COVER INSTALLATION:

General: The existing surface shall be cleared of all trash and rubble (except as indicated in previous section) prior to placement of cover materials. Placing of cover materials shall be done only when approved by the Contractor. The Subcontractor shall not place materials on frozen surfaces, in standing water, or when materials contain snow, ice, frozen materials, or excessive moisture.

Excavation: Earth excavation within the construction area shall be minimized. Excavations shall be permitted for minor grading only to achieve proper surface preparation prior to placement of borrow materials.

Unauthorized Excavation: Unauthorized excavation consists of removal of materials beyond indicated elevations or dimensions without specific direction by the Contractor.

Unauthorized excavation, as well as remedial work directed by the Contractor, shall be at the Subcontractor's expense.

Unstable Soils: If wet or otherwise unsatisfactory soil is encountered, it shall be brought to the immediate attention of the Contractor, see General Provisions Section GP-44, "Differing Site Conditions."

Control of Water: The Subcontractor shall furnish, install, and operate the equipment required to keep surface water away from the contaminated soil boundary (area shown inside the radiological control fence on the drawings) by constructing temporary ditches, berms, or other appropriate means of control.

Placement: All material must be placed or spread in uniform layers not to exceed 8-in. loose measurement and brought up simultaneously and evenly across the site. Strict attention shall be required to ensure a smooth, straight horizontal interface between the materials with minimal mixing of the two layers. Each layer shall have a smooth surface with consistent slope. Placement of subsequent layers shall not begin until the Contractor inspects and approves the subgrade and placement conditions for all underlying material layers.

Previously approved compacted subgrades disturbed by subsequent construction operations by the Subcontractor or adverse weather shall be reworked to the required placement conditions specified herein or to the satisfaction of the Contractor.

Special Requirements: Upon completion of the cobble layer, the pea gravel layer shall be placed onto the cobble by end dumping and pushed into place using a Contractor-approved small steel track bulldozer, or similar approved equipment. The bulldozer shall remain on the upper lift while spreading the material, taking care not to disturb the smooth transition between the cobble and gravel layers.

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Likewise, native soil shall be placed onto the pea gravel layer and pushed into place using a Contractor-approved small steel track bulldozer, or similar approved equipment. The bulldozer shall remain on the upper lift while spreading the material, taking care not to disturb the smooth transition between the native soil and pea gravel layers.

Compaction: Unless otherwise indicated on the drawings or specifications, compaction requirements are as follows. Compaction shall be achieved using a smooth-roller vibratory compactor with a minimum of 20,000 pounds operating weight.

No water shall be used for placing, settling, or compacting the cover materials except to obtain the necessary moisture content for proper compaction. Moisture content (w) for compaction shall be maintained on the dry side of optimum, as determined by AASHTO T99.

- Existing Surface: After mowing and prior to placement of the pit run gravel, the existing surface shall be “proof” rolled using four passes of the smooth roller vibratory compactor.
- Pit Run Gravel: Pit run gravel shall be compacted to at least 95% maximum dry density as determined by AASHTO T99.
- Pea Gravel and Cobble Layers: Pea gravel and cobble layers shall be consolidated using 1 to 2 passes of the roller without vibration.
- Native Loam Soil (Lincoln Boulevard Borrow and Spreading Area A): The first lift of loam material over the pea-gravel layer shall be minimally compacted using 1 to 2 passes with the roller without vibration. Additional lifts shall be compacted to not less than 85% and not greater than 90% maximum density and the top 1.0 foot shall be minimally compacted to not less than 80% and not greater than 85% maximum density as determined by AASHTO T99.

Unless otherwise noted, loose measurement lifts shall be 8 inches maximum. Each lift shall be compacted before the next lift is placed thereon. Compacted backfill or fill density and moisture content may be measured by the Contractor at any location and depth. Sections of backfill or fill failing to meet the minimum compaction requirements shall be corrected prior to placement of subsequent lifts.

Lifts found to be in excess of the density and moisture content specifications shall be loosened with a disc to the full depth of the lift, allowed to dry as required, and recompacted until the specified density or moisture content is obtained.

Finish grading: The finished surface of the cover and the immediate surrounding area shall be graded to encourage drainage away from the cover. All areas that are disturbed by the earthwork activities shall be revegetated, as per Specification 02486-Revegetation. The existing gravel access road will remain in place.

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EQUIPMENT:

General: All equipment and tools used by the Subcontractor to perform the work shall be subject to inspection by the Contractor before the work is started and shall be maintained in satisfactory working conditions at all times. The Subcontractor's equipment shall have the capability to perform the indicated work specified here in.

All equipment brought to the site slated for work in the contamination zone shall be identified to the Contractor prior to delivery and shall be clean and free of grease and oil spots due to the potential for contamination. Where applicable, tires will be in a like-new condition and free of slits and cracks. The Contractor reserves the right to reject equipment not meeting these standards.

The Subcontractor shall ensure that all equipment used for clearing vegetation or earthwork is fitted with appropriate safety devices that comply with all applicable federal laws and the HASP for Waste Area Group 4 Remedial Design/Remedial Action. The safety devices shall adequately protect the operator and minimize exposure of workers and others to potentially contaminated material.

Watering Equipment: Provide water tank trucks capable of applying a uniform unbroken spread of water over the surface. A suitable device for positive shut-off and regulation of flow shall be located to permit operation by the driver in the cab. Additional criteria are addressed in SC-9 of the Special Conditions.

DECONTAMINATION:

Decontamination of all Subcontractor equipment or tools shall be in accordance with the General Provisions, Article 24 (GP-24).

The decontamination activities will be performed within the existing CFA-08 area. Radiological Control Technician (RCT) support will be provided by the Contractor when establishing these areas. All tools and equipment will be decontaminated with dry methods using brooms, wire brushes, and putty knives. If equipment has residual contamination after the initial dry decontamination efforts, it will be cleaned with low volume, high-pressure water from a portable spray unit. The tools and equipment to be cleaned will be isolated in a decontamination pad. Any dry material and water used for decontamination efforts will be collected and disposed of by the Subcontractor at an approved facility. All water used for decontamination must be contained within the decontamination pad until it can be transported to the disposal facility for disposal. Upon completion of the removal action, the decontamination pad must be size reduced, transported, and disposed of at an approved facility.

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METHOD OF MEASUREMENT:

Dust Control: Dust control will not be measured for separate payment.

Mowing Vegetation: Mowing Vegetation will not be measured for separate payment.

Distribution Box Demolition: Demolition of the distribution boxes will not be measured for separate payment.

Borrow: Borrow materials will be measured by the cubic yard in their original position from field survey, using the average end area method with no correction for curvature.

Where it is impractical to measure material by either the average end area method or in its original position, alternate practical approved methods with appropriate adjustments may be used.

Granular Borrow: Granular borrow materials will be measured by the cubic yard in their final position from field survey, using the average end area method with no correction for curvature.

Decontamination: Decontamination will not be measured for separate payment.

BASIS OF PAYMENT:

Dust Control: No separate payment will be made for dust control. It shall be considered incidental to other items of work.

Mowing Vegetation: Payment for mowing vegetation shall be included in the Lump Sum bid item—Balance of Work.

Distribution Box Demolition: Payment for distribution box demolition will be included in the Lump Sum bid item—Balance of Work.

Borrow: Payment will be made at the contract unit price per cubic yard of soil in its original location. The payment shall be full compensation for all work associated therewith, including but not limited to, loading, hauling, placing, compacting, minor grading and excavating, demolishing and backfilling distribution boxes, and proof rolling.

Granular Borrow: Granular borrow will be paid for at the contract unit price per cubic yard of soil in its final location. The payment shall be full compensation for all work associated

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therewith, including but not limited to, cost of material acquisition, loading, hauling, placing, grading, and compacting.

Decontamination: No separate payment will be made for decontamination. It shall be considered incidental to other items of work.

FIELD QUALITY CONTROL:

Inspection, as outlined in the table below, will be performed by the Contractor to verify compliance of the work to the drawings and specifications. The Subcontractor shall notify the Contractor when an area or item is ready for testing.

Field Placement Testing: Topographic surveys may be conducted by the Contractor prior to the start and upon completion of each borrow source and/or soil layer to verify quantities.

The table below outlines the test, frequency, and method for field placement testing to be performed by the Contractor. Testing shall be performed in accordance with either of the two standard test methods indicated.

Test	Frequency	AASHTO Standard Test Method	ASTM Standard Test Method
<u>Material Properties</u>			
Standard Proctor for free draining, pit run gravel and native loam soil	Minimum 1 per source or change in soil type	AASHTO T99, Method C	ASTM D698, Method C
Sieve Analysis—Native Loam Soil (Lincoln Blvd & Spreading Area A)	Minimum 1 per source or change in soil type	AASHTO T27	ASTM D422
Sieve Analysis—Granular Borrow (Pea Gravel and Cobble)	Minimum 1 per source	AASHTO T27	ASTM D422
Atterberg Limits for Native Loam Soil	Minimum 1 per source or change in soil type	AASHTO T90	ASTM D4318
<u>In-Place</u>			
In Situ Moisture Content	1 per 50,000 square feet per lift (pit run layer and following first lift of loam layer)	AASHTO T239	ASTM D3017
In Situ Dry Unit Weight	1 per 50,000 square feet per lift (pit run layer and following	AASHTO T238	ASTM D2922

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	first lift of loam layer)		
Visual Inspection of Cobble and Pea Gravel Layers	Daily	N/A	N/A
<u>Calibration and Check</u>			
Standard Count Calibration	1 per day of fill placement	AASHTO T238/T239	ASTM D3017/D2922
Oven Moisture Content (In Situ Moisture Content)	1 per day of fill placement	AASHTO T265	ASTM D2216
The material properties for these materials have already been tested on-Site, and will be made available to the subcontractor on request.			

- 1
2 Verification testing using other in-place methods such as Density and Unit Weight of Soil
3 In-Place by the Sand Cone Method (American Society for Testing and Materials [ASTM]
4 D1556), Density and Unit Weight of Soil In-Place by the Rubber Balloon Method (ASTM
5 D2167), or other accepted methods may be performed at the discretion of the Contractor.
6
7 Acceptance: Placed materials not in accordance with the requirements of this specification
8 shall be repaired and/or replaced by the Subcontractor. Acceptance criteria for repaired
9 and/or replaced materials shall be in accordance with the original requirements of this
10 specification.
11
12 Areas that do not conform to the compaction specifications shall be first investigated by the
13 Subcontractor to determine the extent of the non-conformance. Areas that are of a different
14 material type or that have failed the specifications after efforts to recompact the soil shall
15 undergo additional testing regardless of the testing frequency guidelines above. The
16 Contractor will determine when additional testing is required.
17
18 END OF SECTION 02200

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SECTION 02444--CHAIN LINK FENCING

PART 1--GENERAL

SUMMARY:

The Subcontractor shall provide all labor, material, and equipment to construct the fence in accordance with the drawings and these specifications.

Section Includes, but is not limited to:

Install GFE chain link fence fabric and gates, and furnish and install new fencing (as required) as shown on the drawings, including all hardware, complete and ready to use.

REFERENCES:

The following documents, including others referenced herein, form part of this section to the extent designated herein.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 90	Standard Test Method for Weight (Mass) of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings
ASTM A 123	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 392	Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric
ASTM A 824	Standard Specification for Metallic-Coated Steel Marcellled Tension Wire for Use with Chain Link Fence
ASTM F 626	Standard Specification for Fence Fittings
ASTM F 900	Standard Specification for Industrial and Commercial Swing Gates
ASTM F 1043	Standard Specification for Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework
ASTM F 1083	Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures

FEDERAL SPECIFICATIONS

RR-F-191/3D	Fencing, Wire and Post, Metal (Chain-Link Fence Posts, Top Rails and Braces)
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NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 780	Standard for the Installation of Lightning Protection Systems
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1 SUBMITTALS:

2
3 No submittals required for this section.

4
5 PART 2--PRODUCTS

6
7 MATERIALS:

8
9 Chain Link Fabric: Metal fence fabric shall be No. 9 gage wire woven into a 2-in. mesh.
10 Fabric finish shall be hot-dipped zinc galvanized per ASTM A 392. Finish shall provide not
11 less than 1.2 oz of zinc per sq ft of fabric when tested in accordance with ASTM A 90.

12
13 Posts, Rails, and Braces: Posts, rails, and braces shall be hot-dipped galvanized with a
14 minimum average zinc coating of 1.8 oz/sf meeting ASTM F 1083 and ASTM F 1043 for
15 standard galvanized pipe. Pipe sizes and weights (or minimum wall thickness) shall meet
16 ASTM F 1083 or RR-F-191/3D. Line posts shall be 2.375 in. Corner and pull posts shall be
17 2.875 in. O.D. Bracing shall be 1.66 in. O.D. Gate posts shall be 4.0 in. O.D.

18
19 Fittings: Provide fittings for a complete fence installation, including special fittings for
20 corners. Comply with ASTM F 626.

21
22 Bolts: Carriage bolts as required by manufacturer.

23
24 Wire Ties: Use 9-gage minimum galvanized steel wires for tying chain link fabric to rails,
25 posts, and braces. Tie wires shall conform to the diameter of the pipe to which it is attached
26 firmly clasping pipe and fabric with ends twisted at least two full turns. Wire ends shall be
27 bent to minimize hazards to persons or clothing.

28
29 Tension Wire: Tension wire shall be 7-gage, coated coil spring wire with metal and finish
30 matching that of new fabric conforming to ASTM A 824. Locate at bottom of chain link
31 fabric on new fence.

32
33 Swing Gate Posts: New gate posts shall be of galvanized pipe as shown on the drawings and
34 shall conform to ASTM F 900.

35
36 Gate Hardware and Accessories: All hardware and accessories shall be hot-dip galvanized.
37 Double leaf gates shall have fork-type latch with center drop rod with a positive locking
38 gravity device, arranged to engage the gate stop.

39
40 Grounding: Grounding requirements apply only at gates and where power lines pass within
41 100 feet of the fence.

42
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Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.

PART 1 - Material above Finished Grade: Copper

PART 2 - Material on or below Finished Grade: Copper

PART 3 - Bonding Jumpers: Braided copper tape, 1 in. wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules

Connectors and Ground Rods: Listed in UL 467.

1. Connectors for Below-Grade Use: Exothermic welded type or listed nonreversible compression fittings.

2. Ground Rods: Copper-clad steel 5/8 x 120 in.

Concrete: Concrete for fence posts shall be Class 30 (3,000 psi). No test cylinders shall be required for fencing work.

PART 3--EXECUTION

General: Drill holes for post footings in firm, undisturbed or compacted (95%) soil. Place concrete around posts in a continuous pour and tamp for consolidation. Verify that each post is plumb and at the proper elevation and alignment. Set keepers, stops, sleeves, and any other accessories into concrete as required.

It is not anticipated that rock drilling will be required for the placement of the posts. If required, it shall be brought to the attention of the Contractor's Representative.

Top Rails: Run rail continuously through post caps. Provide expansion couplings as recommended by fencing manufacturer.

Center Rails: Install in one piece between posts and flush with post on fabric side, using special offset fittings where necessary.

Brace Assemblies: Install braces so posts are plumb when diagonal rod is under proper tension.

Woven Wire Fabric: Pull fabric taut and tie to posts, rails, and tension wires. Install fabric on sides of posts exterior to the enclosed area and anchor to framework so that fabric remains in tension after pulling force is released.

Stretcher Bars: Thread through or clamp to fabric every 4 in., and secure to posts with metal bands spaced 16 in. o.c.

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1 Tie Wires: Use U-shaped wire, conforming to diameter of pipe to which attached, clasping
2 pipe and fabric firmly with ends twisted at least 2 full turns. Bend wire to minimize hazard
3 to persons or clothing.
4

5 Tension Wire: Install tension wire on new fence before stretching fabric and tie to each post
6 with not less than 9-gage galvanized wire. Fasten fabric to tension wire using 11-gage
7 galvanized steel hog rings spaced 24 in. o.c.
8

9 Fasteners: Install nuts for tension bands and hardware bolts on side of fence opposite fabric
10 side.
11

12 Gates: Install gates plumb, level, and secure for full opening without interference. Install
13 ground-set items in concrete for anchorage, as recommended by fence manufacturer. Adjust
14 hardware for smooth operation and lubricate where necessary. Hinges shall be installed to
15 prevent removal by lifting off. Bolt fasteners shall be peened to prevent removal. Each
16 swing gate installed shall be a double-leaf swinging gate with capacity to open to 180
17 degrees both ways, except for the gate on the northwest side. This gate needs to only open
18 away from the drainfield 180 degrees.
19

20 Grounding: As indicated on drawings, install at all gate openings and where power lines are
21 within 100 feet of fencing. Ground fence on each side of gate opening. Bond metal gates to
22 gate posts and bond across openings, with and without gates, except openings indicated as
23 intentional fence discontinuities. Use No. 2/0 AWG wire and bury it at least 12 in. below
24 finished grade. At each grounding location, drive a ground rod vertically until the top is 6 in.
25 below finished grade. Connect rod to fence as shown on the drawings. Connect bonding
26 jumper between gate post and gate frame.
27

28 METHOD OF MEASUREMENT:

29

30 Fence Installation/Erection: Fence installation will not be measured.
31

32 BASIS OF PAYMENT:

33

34 Fence Installation/Erection: Payment for fence installation/erection shall be included in the
35 Lump Sum bid item—Balance of Work.
36

37 FIELD QUALITY CONTROL:

38

39 Surveillance will be performed by the Contractor's Representative to verify compliance of
40 the work to the drawings and specifications.
41

42 END OF SECTION 02444

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1 SECTION 02486--REVEGETATION

2
3 PART 1--GENERAL

4
5 SUMMARY:

6
7 Section Includes, but is not limited to preparing seedbeds, sowing grasses, applying
8 fertilizer, and applying a GFE wood chip mulch (on the drainfield cover only) to revegetate
9 disturbed sites and borrow sources (except CFA gravel pit).

10
11 SUBMITTALS:

12
13 Submittals include, but are not limited to, the following:

14
15 Subcontractor qualifications
16 Seed mix certification
17 Results of soil fertilizer analysis

18
19 See Section 01300, Submittals, and the Vendor Data Schedule for additional submittal
20 requirements.

21
22 QUALITY CONTROL:

23
24 Subcontractor's Qualifications: The Subcontractor shall have at least five or more years of
25 experience with reclamation of disturbed areas and borrow sources, preparation of soil
26 seedbeds, and application of seed mix and fertilizer. The Subcontractor shall furnish a list of
27 projects of similar size and complexity. Information shall include project name, area of
28 revegetation, and contact name and phone number.

29
30 PART 2--PRODUCTS

31
32 MATERIALS:

33
34 Seed Mix(es): Seed mixes shall be free of noxious weeds and other deleterious materials.
35 The following seed mix shall be used for all disturbed areas including the drainfield cover,
36 Lincoln Boulevard and adjacent areas disturbed during the remedial action:
37

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1

SPECIES	RATE OF APPLICATION (POUNDS PER ACRE PURE LIVE SEED)
"Secar" Bluebrush Wheatgrass (<i>Pseucloroegneria Spicata</i>)	3
"Critanna" Thickspike wheatgrass (<i>Elymus lanceolatus</i>)	2
Northern Sweetvetch (<i>Hedysarum boreale</i>)	1.5
"Sodar" Streambank Wheatgrass (<i>Elymus Lanceolatus</i>)	3
Green Rabbitbrush (<i>Chrysothamnus Viscidiflorus</i>)	0.25
Wyoming Big Sagebrush (<i>Artemisia Tridentata SSP Wyomingensis</i>)	0.5
Total	10.25

2

3 Seed Mix (Spreading Area A): The following seed mix shall be used for all disturbed areas in
4 and around Spreading Area A:

5

SPECIES	SEEDING RATE (LBS PURE LIVE SEED PER ACRE)
Bottlebrush Squirreltail grass (<i>Elymus Elymoides</i>)	4
Streambank Wheatgrass "Sodar" (<i>Elymus Lanceolatus ssp. Psammophilus</i>)	4
Thickspike Wheatgrass "Bannock" (<i>Elymus Lanceolatus ssp. Lanceolatus</i>)	4
Western Wheatgrass (<i>Pascopyrum Smithii</i>)	4

6

7 Fertilizer: The subcontractor shall perform a soil analysis of the soils at the installed
8 drainfield cover and borrow sources (except at the CFA gravel pit) to determine the
9 appropriate fertilizer mix and application rates for successful growth of the specified seed
10 mix. All costs associated with the soil analysis and fertilizer requirements shall be included
11 in the subcontract price.

12

13 Mulch: Mulch shall be processed wood chips supplied by the Contractor at no cost to the
14 Subcontractor.

15

16

17

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1 EQUIPMENT:

2
3 Seedbed Preparation: Disks, harrows, roller harrow-packers (culti-packers), tooth-type
4 harrows, shovels, or other similar equipment.

5
6 Seeding and Fertilizing: Brillion seeder, or similar approved equipment.

7
8 PART 3--EXECUTION

9
10 Borrow (except CFA Gravel Pit): Prior to reclamation, depleted pit section side slopes and
11 floor will be seeded on an annual basis (if necessary) to minimize encroachment of the
12 weedy/exotic species and reduce erosion. The mixture of seed will be compatible with re-
13 vegetation objectives.

14
15 The native species selected will provide diversity and perennial cover equivalent to the cover
16 existing prior to borrowing activities, and will stabilize the soil surface.

17
18 The disturbed area(s) of Spreading Area A will be restored to vegetative conditions capable
19 of supporting pre-disturbance conditions, that is, wildlife use and livestock grazing.

20
21 Season of Work: Weather permitting, the area(s) will be revegetated during the late fall (mid
22 October through November) or late winter (February through early March). Specific ideal
23 seeding times within this window shall be as required for proper seedbed preparation.

24
25 Weed Control: Areas to be seeded shall be maintained free of weeds. Weeds shall be kept
26 from going to seed.

27
28 Seedbed Preparation: Soil shall be tilled a minimum depth of 4 inches. The seedbed shall be
29 firm below seeding depth and well pulverized and loose on top. It shall be free of clods and
30 weeds. Seedbed preparation shall not be performed when soil conditions are not suitable for
31 tilling—too dry, too wet, frozen, etc. Tillage shall produce cross-slope furrows on slopes.

32
33 On areas subject to severe erosion, the extent of seedbed preparation shall not exceed that
34 which can be seeded in one day.

35
36 Fertilizing: Fertilizing shall closely follow seedbed preparation. Fertilizer shall not be mixed
37 with seed. Fertilizer may be drilled or broadcast. Fertilizer shall be applied at a rate
38 determined by the soil analysis.

39
40 Seeding: Seeding shall closely follow fertilizing. If the seedbed has been disturbed, then the
41 Subcontractor shall prepare the seedbed again. Seeding work shall not proceed until the
42 seedbed has been inspected. Seeds shall be thoroughly mixed prior to application. Seeds
43 shall be uniformly applied at the previously specified rate. Seeds shall be buried 0.25 to 0.75

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1 inches. Seeding shall not be performed when weather conditions are unfavorable—high
2 wind, heavy rain, etc. Drilling shall maintain cross-slope furrows on slopes.

3
4 Mulching: GFE wood chip mulch shall be spread uniformly at a rate of 15 to 17 tons per
5 acre over the drainfield cover (inside the area of the new fence). Mulching shall not be
6 performed when wind interferes with the placement.

7
8 Protection: Traffic over seeded area shall be prohibited.

9
10 METHOD OF MEASUREMENT:

11
12 Revegetation: Revegetation will be measured by the acre using field survey or other method
13 jointly agreed upon by the Subcontractor and the STR.

14
15 BASIS OF PAYMENT:

16
17 Revegetation: The accepted quantities of revegetation will be paid for at the contract unit
18 price per acre of revegetated area. This price shall include all materials and labor necessary
19 to complete the seeding per the drawings and these specifications, including but not limited
20 to - seedbed preparation, seeding, mulching, and fertilizing.

21
22 FIELD QUALITY CONTROL:

23
24 Seedbed Inspection: Seeding shall not proceed until the Contractor's Representative has
25 inspected the seedbed for conformance to these specifications.

26
27 Surveillance will be performed by the Contractor's Representative to verify compliance of
28 the work to the drawings and specifications.

29
30 END OF SECTION 02486

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VENDOR DATA SCHEDULE

Project Title: CFA-08 STP Drainfield Cover Purchase Order / Work Order / Subcontract No.: TBD

System Engineer / Project Manager: Stephen G. Wilkinson Date: 3/04/02 Rev.: 0

Vendor Data Coordinator Address: TBD

VENDOR DATA CODES					
A. As-Built Drawings	K. Manufacturer's Data Report	U. Shop Drawings	AE. MSDS	AO - Design Qualification Testing	
B. Assembly Drawings	L. O & M Manual	V. Survey Records	AF. Hardware Schedule	AP - Traceability Procedure	
C. Attendance Record	M. Parts List	W. Test Procedure	AG. Specification	AQ - Cleaning Procedure	
D. Blasting Plan	N. Piping Drawing	X. Special Processes	AH. Manufacturing/Inspection/Test Plan	AR - Weld Procedure Qualifications	
E. Catalog Data	O. Procedure/Instructions	Y. Operational / CC Testing	AI. Test Certification	AS - Welder Performance Personnel Qualifications	
F. Chem & Physical Analysis	P. Pump Head Curves	Z. Test Reports	AJ. Recommended Spares	AT - Non-Destructive Examination Personnel Certifications	
G. Concrete Mix Design	Q. Personnel Qualifications	AA. UL/FM Listing	AK. Special Tools List	AU - Inspector Certifications	
H. Control System Diagram	R. Red-line Drawings	AB. Warranty/Guarantee	AL. Certificate of Conformance	AV - Limited Shelf Life / Operational Data	
I. Design Calculations	S. RSMI & Maintenance Log	AC. Weld Records	AM. Certificate of Disposal or Destruction	AW - Special Packaging, Shipping, and Rigging Procedure	
J. Installation Instructions	T. Sample (Color, Texture, etc.)	AD. Wiring Diagrams	AN - Design Verification	AX - Certificate of Materials to ASME Code	
				AY. Other	

WHEN TO SUBMIT					
AC - As Completed	BFA - Before Final Acceptance	PTP - Prior to Purchase	PTC - Prior to Construction Start	TS - Time of Shipment	
AT - After Test	BFR - Before Fabrication Release	PS - Prior to Shipment	PTI - Prior to Installation	WP - With Proposal	
BC - Before Contract Awarded	PDS - Prior to Delivery on Site	PT - Prior to Test	PTW - Prior to Welding		

Item No.	Clause / Article Or Drawing / Specification Reference	Description	Vendor Data Code	Extra Copies Required*	When To Submit	Approval Code 1. App. 2. Info.
1.	01051	Professional Land Surveyor Certification	Q		PTC	2
2.	01051	Copy of Surveyor's Logbook	AY		AC	2
3.	01051	Topographical Surveys	V		AC	1
4.	01300	Redline Drawings (Construction Drawings)	R		BFA	2
5.	02200	Construction Work Plan	O		PTC	1
6.	02200	Sieve Test Reports (for off-site materials)	Z		PDS	1
7.	02486	Qualifications	Q		WP	2
8.	02486	Seed Mix Certification	AL		PTI	2
9.	02486	Results of soil fertilizer analysis	Z		PTI	2
10.	PRD 2101 & 4002	Chemical Inventory List - Form 432.21 (Quarterly Report)	AY		AC	2
11.	PRD 2101 & 4002	Chemical Inventory List - Form 432.21 (Final Report)	AY		After taken off-site	2
12.	PRD 2101 & 4002	Chemical Inventory List - Form 432.21, Initial and re-submittals/with support MSDS'	AE		PDS	1
13.	SC-3	List of diesel and gasoline fueled engines	AY		PTC	1

- Instructions:
1. Refer to subcontract documents for instructions on submittals.
 2. Electronic submittals in lieu of paper documents are acceptable and encouraged.
 - *3. The normal number of copies required is ONE. If more are required, the number will be shown here.
 4. THE INEEL WILL SCAN ALL SUBMITTED VENDOR DATA INTO A SYSTEM THAT IS ACCESSIBLE TO ALL INEEL EMPLOYEES UNLESS THE SUPPLIER/SUBCONTRACTOR IDENTIFIES SUBMITTED INFORMATION AS PROPRIETARY.

SUBCONTRACT NO. S- (TBD)

SCHEDULE "X"

The Government will furnish to the Subcontractor at no cost the equipment or material listed below. The equipment or material may be used by the Subcontractor at the time he is ready to make the installation in accordance with the provisions of the contract.

The items will be available only during normal working hours and a twenty-four (24) hour minimum advance notice (Saturdays, Sunday holidays excluded) to the Subcontracting Officer will be required.

Transportation costs shall be the responsibility of the Subcontractor.

Item No.	Description	Location	Reference	Approximate Cost	Date Available
1.	2600 LF - 6' High Metal Chain Link Fence Fabric	CFA	Drawing C-2 and Specification 02444	No Cost	Award of Contract
2.	4 EA - 6' High x 20' Wide Double Swing Chain Link Gates	CFA	Drawing C-2 and Specification 02444	No Cost	Award of Contract
3.	Wood Chip Mulch	CFA	Specification 02486	No Cost	Award of Contract